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YouthPulse Ghana

AI-Powered National Youth Development
Intelligence Platform

Dashboard Guide for the
Ministry of Youth Development & Empowerment

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Prepared for: Hon. Minister of Youth Development & Empowerment

Built with: 100% Open Source Technology GH

What is YouthPulse Ghana?

YouthPulse Ghana is an AI-powered intelligence platform designed to help the Ministry of Youth Development & Empowerment make data-driven decisions about youth employment, skills development, NEET reduction, and community empowerment across all 16 regions of Ghana.


The Problem We Solve

Ghana faces an interconnected youth crisis: **38.8% youth unemployment**, **25.8% NEET rate** (1.34 million youth not in education, employment, or training), and **72% of youth considering emigration**. Traditional data collection methods are too slow, too fragmented, and too disconnected to drive effective policy responses.

Platform Structure

The dashboard has **four main sections**, accessible from the left sidebar:

DASHBOARD	PURPOSE	KEY QUESTION IT ANSWERS
National Overview	Executive summary of all data	"What is the overall state of youth development in Ghana right now?"
Employment Intelligence	Jobs, skills, labour market	"Are we matching youth to real jobs, and which skills are most needed?"
Youth Empowerment	Programmes, NEIP, digital skills, TVET	"How effective are our empowerment programmes and where should we invest?"
NEET & Community Impact	NEET crisis, migration, civic participation	"Where are the most vulnerable youth and what interventions work?"

 **Tip:** There is also an **"Ask AI"** section where you can type any question in plain English (or Twi) and get instant data-backed answers. Try: *"What is the NEET rate in Northern Region?"*

How to Read the Dashboard

- **Gold numbers** at the top of each page are the most important metrics (KPIs)
- **Green arrows (▲)** mean improvement / growth
- **Red arrows (▼)** mean decline (but for NEET rate, a decline is actually good!)
- **Charts** are interactive — hover over bars or lines to see exact values

- Use the **Region filter** (top-right) to drill down into any of Ghana's 16 regions

1. National Overview

This is the landing page — the first thing you see when you open YouthPulse. It provides a bird's-eye view of the entire youth development landscape across Ghana.

Key Performance Indicators (Top Row)

847,293

YOUTH REGISTERED

▲ +12.4%

23,847

JOBS MATCHED

▲ +8.2%

25.8%

NEET RATE

▼ -2.3% (Good!)

How to Interpret These Numbers

- **Youth Registered (847,293):** Total youth who have created profiles on the platform. The +12.4% means registration is growing month-over-month, indicating strong adoption.
- **Jobs Matched (23,847):** AI-generated job matches between registered youth and available opportunities. Higher is better.
- **NEET Rate (25.8%):** Percentage of 15-35 year olds not in education, employment, or training. The -2.3% decline is **positive** — it means fewer youth are idle.

Critical Alerts Banner

Red and amber alert cards highlight urgent issues requiring immediate attention. These are auto-generated when data crosses critical thresholds. Examples include NEET spikes in specific regions or high youth migration risk.

Charts on This Page

Employment Trends (Line Chart)

Shows 12-month trends for youth registrations, job matches, and placements. Look for: are the lines trending upward? Is the gap between "matches" and "placements" narrowing (meaning more matches are converting to actual jobs)?

Regional Intelligence Map

A scatter plot showing all 16 regions positioned by geography. Dot size indicates youth population; colour intensity shows engagement level. Click any region dot to see detailed regional data.

Skills Gap Snapshot (Bar Chart)

Horizontal bars showing the top skills where demand exceeds supply. Longer bars = bigger gap = more urgent need for training programmes in that skill.

2. Employment Intelligence

This module tracks everything related to youth employment: who is registered, what skills they have, what jobs are available, and how effectively we're matching people to opportunities.

Key Metrics (Top Row)

847,293

YOUTH REGISTERED

▲ +12.4%

23,847

JOBS MATCHED

▲ +8.2%

34.2%

MATCH SUCCESS RATE

▲ +3.1%

What is "Match Success Rate"?

Of all AI-generated job matches, 34.2% resulted in the youth actually getting the job. This is a key effectiveness metric — it tells us whether our AI is recommending the right jobs to the right people.

Charts Explained

Registration & Placement Trends

A stacked area chart showing monthly registrations (gold) and successful placements (green). The gap between the two represents opportunity — the wider the gap, the more youth are registered but not yet placed.

Skills Demand vs Supply (Bar Chart)

Each bar represents a skill. The chart shows how many jobs require that skill (demand) vs. how many registered youth have it (supply). Skills where demand far exceeds supply are **critical training priorities**.


Action: Direct TVET institutions to increase enrolment in skills where the gap is largest (e.g., Solar Installation, Welding, Agricultural Technology).

Employment by Sector (Pie Chart)

Shows which economic sectors are generating the most youth employment. Use this to understand where job creation is strongest and allocate policy support accordingly.

Programme Effectiveness (Horizontal Bars)

Compares government youth employment programmes by their completion rate and employment outcome. Programmes with high completion but low employment rates may need curriculum redesign. This data directly supports budget allocation decisions.

 **Key Decision Point:** If a programme shows >70% completion but <30% employment, it suggests the training content doesn't match employer needs. The AI recommends specific curriculum changes based on current job posting analysis.

3. Youth Empowerment Programmes

This dashboard tracks all major youth empowerment initiatives — from NEIP entrepreneurship grants to the 1 Million Coders Initiative, TVET programmes, and Youth Resource Centres across Ghana.

Key Metrics (Top Row)



Charts Explained

Programme Performance Overview (Grid Cards)

Eight programme cards showing each initiative's enrolment, completion rate, transition-to-employment rate, and budget. Each card acts as a mini-report. Look for:

- **High transition rate** (above 50%) = programme is working well
- **Low transition rate** (below 30%) = needs review or redesign
- **Low completion rate** = youth are dropping out mid-programme (investigate barriers like transport cost, stipend inadequacy)

NEIP Funding Pipeline (Funnel Chart)

Shows the entrepreneurship grant application pipeline: Applications Received → Screened → Approved → Disbursed → Businesses Launched. Look at the **conversion rate** at each stage. A big drop between "Approved" and "Disbursed" may indicate bureaucratic bottlenecks.

Digital Skills Progress

A large progress bar showing progress toward the 500,000 youth digital literacy target. Currently at 124,500 (24.9%). The bar turns green as it approaches target. Below the bar, a breakdown shows which specific digital skills youth are being trained in.

TVET Regional Performance (Grouped Bar Chart)

Compares TVET enrolment, completion, and employment rates across regions. This chart reveals which regions have effective TVET ecosystems and which need infrastructure or curriculum support. Northern regions typically show lower rates, highlighting the need for investment.

Youth Resource Centres Network (Grid)

A grid showing all Youth Resource Centres across Ghana with their status (operational, under construction, planned), capacity, and utilisation rate. Centres with >80% utilisation may need expansion; those below 40% may need better programming.

4. NEET & Community Impact

This is arguably the most critical dashboard. It tracks Ghana's NEET crisis (1.34 million youth not in education, employment, or training), migration risk, intervention effectiveness, and community-level impact.

Key Metrics (Top Row)

25.8%

NATIONAL NEET RATE

▼ -2.3% (Improving!)

1.34M

NEET YOUTH (TOTAL)

72%

CONSIDERING EMIGRATION

▲ Critical

⚠ **Understanding NEET:** NEET stands for "Not in Education, Employment, or Training." A 25.8% NEET rate means roughly **1 in 4 Ghanaian youth** is completely disengaged from the formal economy and education system. This is classified as a **national security risk** by government analysts.

Charts Explained

NEET Trend & Outreach (Combined Chart)

A dual-axis chart with bars (NEET rate by quarter) and a line (outreach contacts made). The goal is to see NEET bars declining while the outreach line rises — this means interventions are working. If NEET rises despite outreach, the interventions need redesign.

NEET by Region (Horizontal Bars)

Shows NEET rates for all 16 regions. Red-shaded bars indicate critical rates (above 30%). This chart instantly tells you **where to prioritise intervention spending**. Northern, Upper East, and Savannah consistently show the highest rates.

Migration Risk (Donut Chart)

Shows that 72% of youth are considering emigration. The donut breaks down by intent level: actively planning (most urgent), considering, and not considering. This metric is critical for crafting retention policies.

Intervention Effectiveness (Ranked Cards)

Seven intervention types ranked by their **NEET-to-employment transition rate**. This tells you which programmes most effectively convert idle youth to productive citizens. Top performers like "Digital Skills Training" (67.3%) deserve more funding; underperformers need restructuring.

District Coverage (Donut + Stats)

Shows that 198 of 261 MMDAs have at least one active intervention programme. The remaining 63 are "dark spots" with no coverage. This guides geographic expansion decisions.

5. Ask AI — Your Intelligent Assistant


The "Ask AI" feature lets you type any question in plain English or Twi, and the system returns a data-backed answer drawn from all YouthPulse databases.

How It Works

1. Click **"Ask AI"** in the left sidebar
2. Type your question in the text box at the bottom
3. The AI processes your question, queries the database, and returns a detailed answer
4. Answers include specific numbers, regional breakdowns, and actionable recommendations

Example Questions You Can Ask

QUESTION	WHAT YOU'LL GET
"How many youth found jobs in Northern Region this quarter?"	District-level breakdown with skill demand data and recommendations
"What is the current NEET rate and which regions are most affected?"	Full NEET analysis with regional ranking and gender breakdown
"How effective are our youth empowerment programmes?"	Programme-by-programme comparison with transition rates and ROI
"What's the ROI of the Adwumawura programme?"	Detailed cost-per-outcome analysis with comparison to other programmes
"How many youth are at risk of emigrating?"	Migration risk analysis with regional hotspots and retention recommendations
"Which regions have the worst skills gaps?"	Supply-demand gap scores for each region with specific skills listed
"Sen na adwuma hwehwe ko so wo Ashanti Region?"	Full response in Twi with English translation included

 **Data Sovereignty:** All AI processing runs **locally on government servers** using open-source Llama 3.1. No data ever leaves Ghana. Full compliance with Ghana Data Protection Act (Act 843).

Desktop & Mobile

- **Desktop:** Use the left sidebar to navigate between dashboards. Click the collapse arrow to maximise chart space.
- **Mobile:** Tap the menu icon (three lines) in the top-left corner to open the sidebar. The dashboard is fully responsive and optimised for mobile viewing.
- **Region filter:** Use the dropdown in the top-right to filter all data by a specific region.
- **Time period:** Select "This Month," "This Quarter," or "This Year" to adjust the time window.
- **Hover on charts:** Move your cursor over any chart element to see exact values in a tooltip.

Glossary of Key Terms

TERM	WHAT IT MEANS
NEET	Not in Education, Employment, or Training. Youth who are completely disengaged from the formal economy.
NEET Rate	Percentage of youth (15-35) who are NEET. Lower is better. National target: below 15% by 2030.
Match Success Rate	Of all AI-suggested job matches, what percentage resulted in actual employment.
Skills Gap	When employers need a skill but not enough youth have it. Gap ratio = demand ÷ supply. Above 2.0 = critical.
Transition Rate	Percentage of programme completers who move into employment or self-employment within 12 months.
NEIP	National Entrepreneurship and Innovation Programme — provides grants and mentorship to young entrepreneurs.
TVET	Technical and Vocational Education & Training — hands-on skills training (welding, plumbing, coding, etc.).
NABCO	Nation Builders Corps — government programme for graduate employment.
YEA	Youth Employment Agency — coordinates youth employment modules and interventions.
MMDA	Metropolitan, Municipal, and District Assembly — Ghana's 261 local government units.
KPI	Key Performance Indicator — a measurable value that shows whether objectives are being achieved.
ROI	Return on Investment — for every GH¢1 spent, how much economic value is generated.
Migration Risk	Likelihood that youth will emigrate, based on NEET status, survey data, and passport application trends.
District Coverage	Number of MMDAs (out of 261) that have at least one active youth intervention programme.

